Amendments to the Claims

Claim 1. (Original) A method comprising:

varying the power of an input signal to an outphasing system at a first range of output power values; and

adjusting a phase of said outphasing system at a second range of output power values.

Claim 2. (Original) The method of claim 1, wherein said outphasing system has shunt reactance.

Claim 3. (Original) A method comprising:

varying the power of an input signal to a power amplifier when a desired output power is below a threshold; and

performing outphasing when said desired output power is at said threshold and above said threshold.

Claim 4. (Cancelled)

Claim 5. (Currently Amended) The method of claim 36, wherein said outphasing system ~~with shunt reactance~~ has a peak efficiency at an upper power at a first value of said variable phase and at a lower power at a second value of said variable phase, wherein said threshold is said lower power and said fixed value is said second value.

Claim 6. (Currently Amended) The method of claim 36, wherein ~~the~~ said outphasing system is ~~operably~~ coupled to at least one of a radio frequency (RF) preamplifier and to an intermediate frequency (IF) amplifier and reducing the power of the input signal comprises:

lowering a gain of at least one of said RF preamplifier and said IF amplifier.

Claim 7. (Previously Amended) The method of claim 36, wherein said variable phase is a collection of discrete phase values.

Claim 8. (Currently Amended) The method of claim 7, wherein said outphasing system ~~with shunt reactance~~ has a peak efficiency at an upper power at a first value of said variable phase and at a lower power at a second value of said variable phase, wherein said threshold is said lower power and said fixed value is said second value.

Claim 9. (Currently Amended) The method of claim 7, wherein said outphasing system is ~~operably~~ coupled to at least one of a radio frequency (RF) preamplifier and to an intermediate frequency (IF) amplifier and reducing the power of the input signal comprises:

lowering a gain of at least one of said RF preamplifier and said IF amplifier.

Claim 10. (Previously Amended) A method comprising:

providing a first method of power control in a radio frequency power amplifier for a desired output power at a first range of power values which is below a threshold; and

providing a second method of power control in said power amplifier for a desired output power at a second range of power values which is above or at said threshold.

Claim 11. (Previously Amended) A method comprising:

providing a first method of power control in a radio frequency power amplifier for a desired output power at a first range of power values which is below a threshold; and

providing a second method of power control in said power amplifier for a desired output power at a second range of power values which is above or at said threshold,

wherein said first method is reducing the power of an input signal to said power amplifier and said second method is outphasing.

Claim 12. (Original) The method of claim 11, wherein said outphasing is setting at least one phase value from a collection of discrete phase values.

Claim 13. (Previously Amended) A method comprising:

providing a first method of power control in a radio frequency power amplifier for a desired output power at a first range of power values which is below a threshold; and

providing a second method of power control in said power amplifier for a desired output power at a second range of power values which is above or at said threshold,

wherein said first method is reducing the power of an input signal to said power amplifier and said second method is outphasing and reducing the power of the input signal.

Claim 14. (Original) The method of claim 12, wherein said outphasing is setting at least one phase value from a collection of discrete phase values.

Claim 15. (Currently Amended) A method comprising:

modifying the amplitude of an input signal to an outphasing system ~~with~~ having shunt reactance.

Claim 16. (Currently Amended) The method of claim 15, wherein said outphasing system is ~~operably~~ coupled to at least one of a radio frequency (RF) preamplifier and to an intermediate frequency (IF) amplifier and said modifying comprises:

adjusting a gain of at least one of said RF preamplifier and said IF amplifier.

Claim 17. (Currently Amended) A method comprising:

modifying the amplitude of input to at least one of two branch amplifiers of an outphasing system ~~with~~ having shunt reactance.

Claim 18. (Currently Amended) The method of claim 17, wherein a first of said two branch amplifiers is ~~operably~~ coupled to a first radio frequency preamplifier and a second of said two branch amplifiers is ~~operably~~ coupled to a second radio frequency preamplifier and said modifying comprises:

adjusting a gain of said first radio frequency preamplifier and adjusting a gain of said second radio frequency preamplifier.

Claim 19. (Currently Amended) A method comprising:

modifying the input to an outphasing system ~~with~~ having shunt reactance; and

performing bias control in said outphasing system ~~with shunt reactance~~.

Claim 20. (Currently Amended) The method of claim 19, wherein said performing comprises:

reducing an internal bias current of at least one branch amplifier in said outphasing system ~~with shunt reactance~~.

Claim 21. (Currently Amended) The method of claim 19, wherein said performing comprises:

reducing a supply voltage of at least one branch amplifier in said outphasing system ~~with shunt reactance~~.

Claim 22. (Original) A radio frequency (RF) power amplifier comprising:

a controller coupled to an outphasing system to provide a variation of the power of an input signal to said outphasing system at a first range of output power values and to provide an adjustment of a phase of the outphasing system at a second range of output power.

Claim 23. (Original) The RF power amplifier of claim 22, wherein said outphasing system further comprises a shunt reactance.

Claim 24. (Original) A radio frequency (RF) power amplifier comprising:

a controller coupled to an outphasing system to provide a variation of the power of an input signal to said outphasing system when a desired output power is below a threshold and said controller performs outphasing when said desired output power is at said threshold and above said threshold.

Claim 25. (Original) The RF power amplifier of claim 24, wherein said outphasing system further comprises a shunt reactance and at least two phase shifters and wherein said controller is coupled to said phase shifters to provide each of said phase shifters with a phase value.

Claim 26. (Original) The RF power amplifier of claim 25, wherein said outphasing system has a peak efficiency at an upper power and at a lower power, wherein said threshold is said lower power.

Claim 27. (Currently Amended) The RF power amplifier of claim 25, wherein said outphasing system is ~~operably~~ coupled to at least one of a radio frequency (RF) preamplifier and to an intermediate frequency (IF) amplifier and said controller is coupled to at least one of said RF preamplifier and said IF amplifier to provide an adjustment of a gain of said at least one of said RF preamplifier and said IF amplifier.

Claim 28. (Original) The RF power amplifier of claim 24, wherein said outphasing system comprises at least two phase shifters and said controller is coupled to said at least two phase shifters to provide a collection of discrete phase values to said at least two phase shifters.

Claim 29. (Original) The RF power amplifier of claim 28, wherein said outphasing system comprises a shunt reactance and has a peak efficiency at an upper power and at a lower power, wherein said threshold is said lower power.

Claim 30. (Currently Amended) The RF power amplifier of claim 28, wherein the outphasing system is ~~operably~~ coupled to at least one of a radio frequency (RF) preamplifier and ~~to~~ an intermediate frequency (IF) amplifier and said controller is coupled to at least one of said RF preamplifier and said IF amplifier to provide an adjustment of a gain of at least one of said RF preamplifier and IF amplifier.

Claim 31. (Currently Amended) A radio frequency (RF) power amplifier comprising:

a controller ~~operably~~ coupled to at least one of a radio frequency (RF) preamplifier and ~~to~~ an intermediate frequency (IF) amplifier and to an outphasing system ~~with~~ having shunt reactance to provide a modification of the amplitude of an input signal to said outphasing system.

Claim 32. (Currently Amended) The RF power amplifier of claim 31, wherein said outphasing system ~~with shunt reactance~~ comprises:

a splitter ~~operably~~ coupled to at least two RF preamplifiers;

at least two phase shifters each ~~operably~~ coupled to a respective one of said at least two RF preamplifiers; and

at least two branch amplifiers each ~~operably~~ coupled to a respective one of said at least two phase shifters;

wherein said controller is ~~operably~~ coupled to at least one of said at least two RF preamplifiers to provide a gain modification of said at least one of said at least two RF preamplifiers.

Claim 33. (Currently Amended) A radio frequency (RF) power amplifier comprising:

an outphasing system ~~with~~ having shunt reactance ~~operably~~ coupled to a controller wherein said controller is coupled to said outphasing system to provide a modification of an input signal to said outphasing system and to perform bias control in said outphasing system.

Claim 34. (Original) The RF power amplifier of claim 33, wherein said outphasing system comprises at least one branch amplifier and said controller is coupled to said outphasing system to reduce an internal bias current of said at least one branch amplifier.

Claim 35. (Original) The RF power amplifier of claim 33, wherein said outphasing system comprises at least one branch amplifier and said controller is coupled to said outphasing system to reduce a supply voltage of said at least one branch amplifier.

Claim 36. (Currently Amended) A method comprising:

when a desired output power is below a threshold, setting a variable phase of an outphasing system ~~with~~ having shunt reactance to a fixed value and reducing the power of an input signal to a power amplifier including said outphasing system; and

performing outphasing when said desired output power is at said threshold and above said threshold.